



Lateral Rehab Contractor Increases Efficiencies Using Hydrovac to Locate Lines

Published by Mike Kezdi April 13, 2022

[VIEW PROFILE](#)

For the construction industry, April serves as the unofficial kickoff of the busy season. And since 2008, it has been designating as Safe Digging Month with the goal of encouraging safe digging practices for any project.

In underground utility construction, one of the safest ways to dig is the use of a vacuum excavator. While the use of vacuum excavators in the horizontal directional drilling sector, as well as the utility locating space, is well known, its use in the trenchless rehabilitation space is a little less known.

Ottawa, Illinois-based Performance Pipelining Inc. (PPI) has long known the benefits of vacuum digging and it's a key component of the company's lateral relining process. PPI was one of the first lateral lining companies using LMK Technologies products.

"We've been in business since 1991 and lateral lining is what we do. It's our core business," says Chad Wilson, PPI president. "Vacuum excavation plays a huge role in what we do. The reason we are in hydro excavation is that LMK Technologies has held – for a long time – a patented process for installing cleanouts trenchlessly called the Vac-A-Tee."

For reference, a key component of the Vac-A-Tee process is trenchlessly digging down to the lateral via vacuum excavation to install the saddle.

RELATED: [Right Sizing Your Vacuum Excavator for the Right Job](#)

In 2004, the Corbin family acquired PPI and stayed true to company's roots and continued the focus on lateral rehabilitation. The trenchless contracting company works for municipalities across the Lower

48 from its headquarters in Ottawa, Illinois; a Bedford, Pennsylvania office; and its eyes are set on future growth. Most of its work takes place from the Midwest to the east along the I-80 corridor.



Vacs for Lateral Rehab

As most of this work is on some of America's oldest infrastructure, cleanouts either don't exist or are difficult to locate. To keep the lateral repairs as trenchless as possible, municipalities will specify the cleanout is installed trenchlessly using hydro excavation. One of the reasons for this, Wilson says, is because there is little to no disruption. Oftentimes this is a less invasive way to reach rear easement sewers or where lines are under hardscaping. When installed, the cleanout gives PPI and the municipality an access point to assess the lateral, as well as line if needed.

In its early years, PPI needed a truck to jet and clean a sewer, but as the company's work evolved, it got to the point that crews never used the truck for cleaning. Wilson says on the last Vactor Mfg. combination truck the company owned, he doesn't think that in its years of ownership, the front reel ever got dirty.

"For as long as I have done this, and I've been here for 20 years, we've always had combo-style vac trucks," says Wilson. "We've used them for cleaning sewers, but mostly it was for hydro excavation of the cleanouts. We noticed that we never used the front reel [of the combo truck] ever. It just wasn't part of our core business."

As with other construction equipment, vacuum excavators have evolved quite a bit over the span of Wilson's career. He's watched as durability improved, debris tank size increased, amenities like heated cabinets were added and the advent of remote operation. All these steps in the evolution made it clear that what PPI needed in its fleet was a dedicated truck.

RELATED: [Trenchless Technology Special Report: Undergrounding Power & Communication Lines](#)



Making the Switch

When it was time for a new truck in 2018, PPI switched to a dedicated hydro excavation truck, the Vactor HXX. This gave the team a truck with greater water and debris capacity improving overall efficiency. The production, Wilson notes, is now, “through the roof with the new trucks.” For its sewer flushing needs, PPI uses a variety of jetting equipment.

“The vacuum power it has is second to none compared to what was available back in the day. They are amazing machines, and it is really the heartbeat of what we do. On some our projects, we can’t start our process until we have that access point,” Wilson says. “It’s crucial that we have something that has the ability to hold a large amount of water, a large quantity of debris and is still effective when working off the curb. What that means is you are stretching out the corrugated tubes over a distance. To be able to have a truck powerful enough to pull that debris from the backyard and all the way to the truck, you need a powerful and efficient piece of equipment.”

Because its crews travel, Wilson chose the tri-axle HXX because of its large 15-yd debris tank and more than 1,000-gallon water tank. He notes that while his crew doesn’t typically run fully loaded with debris, the tri-axle ensures that their weight is evenly dispersed if they do. The truck also has dewatering capability on the debris tank to help further bring down the weight of the load.

Other features that are key to Wilson include the heated cabinets and boiler system, which are important when working in near 0-degree days along the I-80 corridor. He also made sure the truck had the wireless operation for operator safety and an automatic transmission. The latter, he says is an important feature that allows anyone – with proper commercial licensure – to drive the truck.

Manhole Rehab for Surf City, North Carolina

David Kozman Representing the United States on ISO Pipe Rehab Committee

2022 No-Dig North Heading to Toronto

UESI Pipelines 2023 Conference Call for Abstracts Open

Microtunneling Key to Outfall Water Line in California

Wilson also appreciates that Vactor Mfg. and TRUVAC equipment all have the same operating system, so an employee can easily move from one truck to the other without skipping a beat improving PPI's efficiency. It's also important when dealing with rentals even if the same truck isn't available.



While PPI is loyal to Vactor Mfg. and now TRUVAC, in his two decades in the industry, Wilson notes that it is amazing to see how the equipment and technology has evolved to meet contractors' needs.

"As with anything in life, understanding what your battle is and having the right tool for the job is key," Wilson says. His crew runs the truck almost 365 days a year and only shuts it down when temps hit about 15 degrees.

RELATED: [Keeping Your Vacuum Excavator in Peak Winter Condition](#)

"We ran all of 2021 with our own truck and a rental truck. I exclusively run one crew on the truck we own. That's all they do is dig," Wilson says. "When our backlog gets to a point where one crew can't handle it, I'll bring in the rental and a second crew. Right now, I piggyback our truck between Illinois and Pennsylvania and rent when needed in Pennsylvania. We have grown our Pennsylvania business to the point where we need to purchase a second truck."

Because Wilson doesn't see work slowing, PPI is in the process of purchasing a new TRUVAC HXX truck for its Pennsylvania facility, and by the end of the year, he plans to have a third TRUVAC truck under a lease. The newly purchased truck will be outfitted similar to the truck it currently owns.

"They've really designed their trucks around user-friendliness and with a contractor's mindset," Wilson says. "Our approach is to install a cleanout in the cleanest, most efficient and most effective way that is not a nuisance to the homeowner or city. By means of hydro excavation, our goal is to install a cleanout...that the homeowner won't even notice we were there to install."



Part of the Process

For the Vac-A-Tee installation process, the PPI hydro excavation crew cuts away a patch of sod and then using the hydro excavator cuts about a 20-in. diameter hole down to the lateral. Wilson notes that the trucks are powerful enough to do the work wherever the cleanout needs to be installed, whether at the curb, in the backyard, under a driveway or even next to the foundation. All of which requires the speed and precision of hydro excavation.

"Typically speaking there are a lot of water lines buried in the same trench. Hydro excavation gives us the ability to never hit a water line," he says. "We see them every single day, but by having the means of hydro excavation, we can be delicate around those lines and not disturb them."



Once the Vac-A-Tee is installed, the crew backfills using stone and because the hole is hydro excavated, it is typically more stable than a traditionally dug hole. This means it is less prone to settling. The sod patch is placed at grade and the crew moves on to the next clean out.

"We have doubled our production in going from the combination truck to the HXX. That's with the same crew and the same eight-hour window. If we were doing three cleanouts in a day, we are now doing six," Wilson says. "Now that we have a custom tool designed specifically for our core business, we are not out there spinning our wheels."

"Having bad equipment will turn a good employee bad. I want to buy the most trusted, dependable and user-friendly piece of equipment that I can. You must set your crew up for success. We want our guys to have the best equipment that is cutting edge, and that's where we are."



Looking Ahead

When looking at the overall vacuum excavation segment, there is a trend to smaller trucks as more and more utilities are requiring soft dig methods for locating utilities. This has led to the introduction of smaller trucks that are more conducive to navigating in tight urban areas.

While PPI does not have one of these smaller units in the fleet, Wilson is not opposed to them. The PPI crew had the opportunity to use a [TRUVAC Prodigy](#) for some work and it performed just as well as their own HXX. However, because he is only operating one to two crews, it makes more sense to have the larger HXX to tackle whatever situation may arise.

"I am not opposed to purchasing one of those [smaller units] down the road...I liked the small footprint and so did the guys," Wilson says. "Truth be told, they were apprehensive when they first saw it, but

then they went and ran it. It's basically the same equipment just on a little bit smaller scale. Once the crews arrived back from the week-long demo, they asked when we were going to add one to our fleet."

As the trenchless rehab industry continues to mature and more and more system owners become proactive rather than reactive, Wilson sees growth potential ahead. Both for lateral lining and the overall vacuum excavation industry.

What this equates to is more work going on belowground, in an increasingly crowded right-of-way, that will require an efficient and safe digging technology. "Vacuum excavation is the cleanest and safest and most efficient way to locate underground infrastructure. It's as simple as that," Wilson says.

[Mike Kezdi is the managing editor of *Trenchless Technology*.](#)

Share:

f

🐦


in

✉


SEE DISCUSSION, LEAVE A COMMENT

▲


Read this next




Vacuum Excavation Check-In – Contractors Looking at Alternatives to Buying New



A Proactive Approach to Inspecting, Rehabilitating Service Laterals Reaps Benefits for ECUA



Year-Round Fibre Installations the Norm for Polar Communications



System Owners Keenly Aware of Role that Leaking Laterals Play in Overall I/I Picture

FREE SUBSCRIPTION

SIGN UP TODAY

FEATURED EDITORIAL

- New Installation
- Directional Drilling
- Pipe Relining
- Rehabilitation
- Engineering
- Manhole Rehab

CONFERENCES & EDUCATION

- HDD Academy
- Microtunneling Short Course
- No-Dig North Show
- Trenchless Technology Road Show

HELPFUL LINKS

- SUBSCRIBE TO TRENCHLESS
- TECHNOLOGY MAGAZINE

©2022 Copyright Trenchless Technology

